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THE PLANT DISEASE REPORTER

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U. S. DEPARTMENT OF AGRICULTURE

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Division of Mycology and Disease Survey

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UNITED STATES DEPARTMENT OF AGRICULTURE

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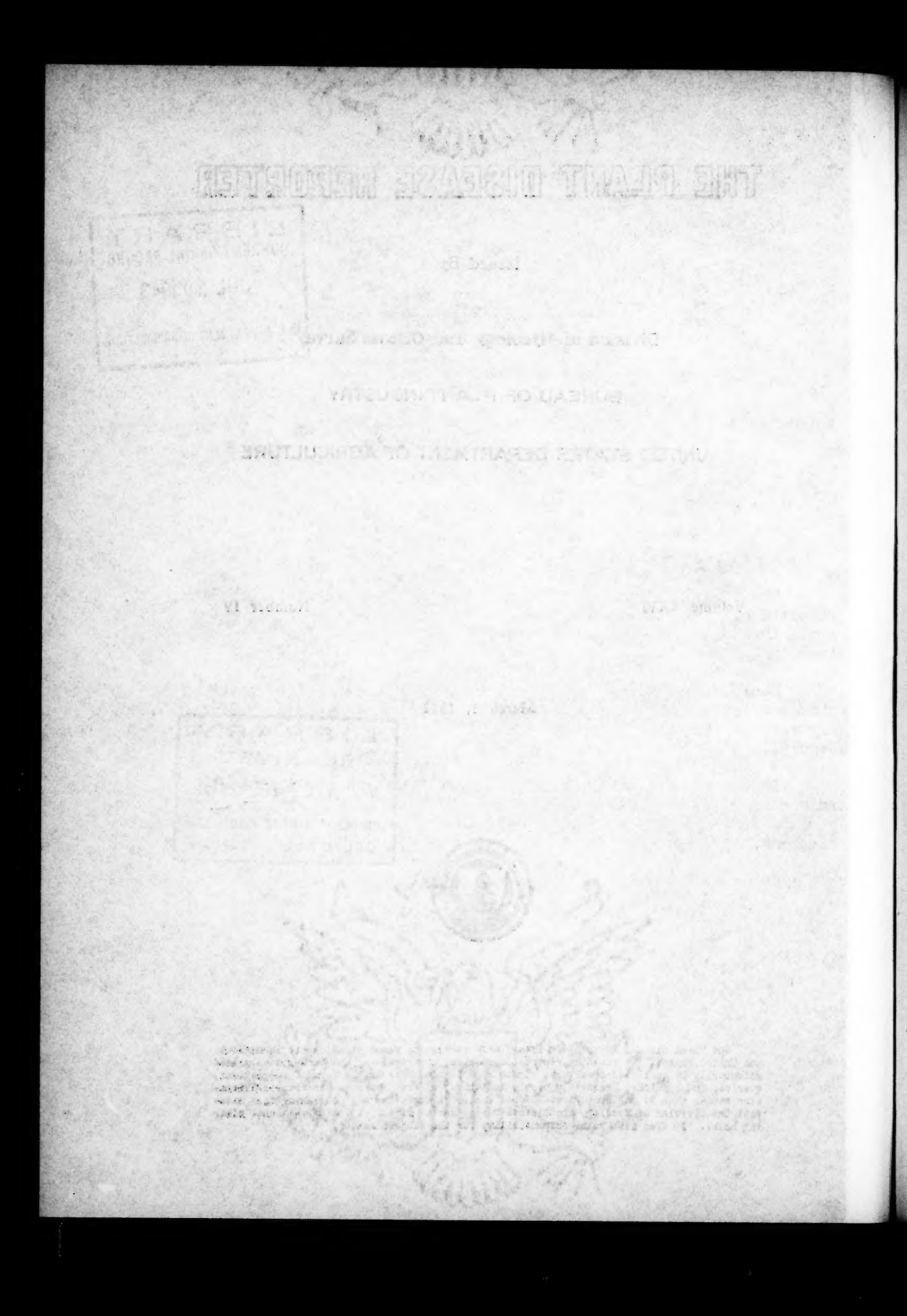
BELTSVILLE BRANCH

The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.



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THE PLANT DISEASE SURVEY

DIVISION OF MYCOLOGY AND DISEASE SURVEY

Volume XXVI March 1, 1942 Number 4

IN THIS ISSUE

Check list revision, by Freeman Weiss, page 84.

The first recorded occurrence of potato late blight in Colorado, reported by W. A. Kreutzer and John G. McLean, page 91, demonstrates again that plant disease distribution depends on the coincidence of host, inoculum, favorable weather, and other necessary conditions.

Earlier favorable conditions for the development of certain pea diseases in the Palouse section of Idaho in 1941 were ended by late summer dry weather and only minor damage resulted, according to W. J. Virgin, page 91.

In response to the suggestion made by O. H. Elmer in an earlier number of the Reporter, R. W. Leukel contributes a brief report on the results from the use of Spergon in an experiment for the control of sorghum diseases, page 93.

Phony Peach: A further correction, page 94.

CHECK LIST REVISION

Freeman Weiss

QUERCUS (FAGACEAE)

QUERCUS spp. Occurring on various or undetermined spp.

Aleurodiscus oakesii (Berk. & Curt.) Cke., smooth patch, white patch. Pa. to Va. & Mo. Other spp. also reported on bark include A. acerinus (Pers.) Höhn. & Litsch. and A. candidus (Schw.) Burt, New England to Fla. & Texas; A. cerassatus (Bres.) Höhn. & Litsch., S. Dak.; A. griseo-canus (Bres.) Höhn. & Litsch., Iowa, Mo.

Armillaria mellea Vahl ex Fr., root rot, butt rot. General.

Ascochyta quercus Sacc. & Speg., on leaves. Wis.

A. quercuum (Cke.) Sacc. Ga.

Ascomycetella floridana Ell., on leaves. Fla.

Asterina spp., black spot (superficial) on living leaves. Gulf States., Calif.

Boletus spp., associated with mycorhiza, possibly sometimes parasitic on roots. Cosmopolitan.

Botryosphaeria spp., on twigs & branches, saprophytic, or weakly parasitic causing dieback & cankers. Collections and reports in the U.S. as B. berengeriana DeNot. or B. fuliginosa (Moug. & Nestl.) Ell. & Ev. are Physalospora obtusa (Schw.) Cke.; B. melanops (Tul.) Wint., on Q. borealis in Conn.; B. quercuum (Schw. ex Fr.) Sacc., Mass. to Ga. and Mo.; B. ribis (Tode ex Fr.) Gross. & Dug. and its var. chromogena Shear et al., Mass. to Fla. & Miss.

Bulgaria inquinans Pers. ex Fr. (B. polymorpha Wettst., Phaeobulgaria i. Nannf.), on bark of branches & trunks. Widespread. Associated with trunk canker, Ill., N.Y.

Clitocybe tabescens (Scop. ex Fr.) Bres. (C. monadelpha (Morg.) Sacc.), root and butt rot. Va. to Mo. and southward.

Coccomyces coronatus (Schum. ex Fr.) DeNot. on fallen leaves. Widespread.

C. triangularis (Schw.) Sacc., twig canker & dieback. Eastern States to La. & Mich.

Colpoma quercinum (Pers. ex Fr.) Wallr. (Clithris quercina Pers. ex Rehm), on twigs. Ga.

Coniophora puteana (Schum. ex Fr.) Karst., wood rot (logs & timber). Occasional.

Coniothyrium sp. (? C. truncisedum Vestergr.), on twigs, ? dieback. Ill.

Cookella quercina Pk., on leaves. Ill.

Corticium lividum Pers. ex Fr., sprout butt rot. Eastern States to La. (Numerous other spp. reported on dead wood.)

Coryneum kunzei Corda, twig & branch canker, dieback. Conidial stage of Pseudovalsa longipes.

(Cronartium cerebrum Hedgc. & Long): C. quercuum.

QUERCUS -- continued.

C. conigenum Hedgc. & Hunt, rust (II, III). On Q. emoryi and Q. hypoleuca, Ariz. O and I on Pinus leiophylla.

C. fusiforme Hedgc. & Hunt, rust (II,III). On Q. nigra, Q. phellos & others. Ala., Fla., Ohio. O and I on Pinus caribaea, P. serotina and P. taeda.

C. quercuum (Berk.) Miyabe, rust (II, III). On various Quercus spp., sometimes perpetuating in the II stage on evergreen oaks. Widespread, especially in the S.E. States and Calif. O, I on 2- and 3-needle pines.

C. strobilinum Hedgc. & Hahn, rust (II,III). On Q. virginiana, Q. geminata & others. Fla. O and I on Pinus caribaea and P. palustris.

Cryptostictis glandicola (Schw.) Starb., on acorns. Pa.

Cuscuta exaltata Engelm., dodder, on seedlings. Texas.

Cylindrosporium microspilum Sacc. & Wint., leaf spot. Mo.

C. quercinum Carter, on branches, ? dieback. Ill.

C. quercus Scrok., leaf spot. Ohio

Cytospora spp. (? C. chrysosperma Pers. ex Fr., C. intermedia Sacc., C. pallida Ell. & Ev.), twig canker, dieback. Conidial stage of Valsa spp.

Daedalea spp., wood rot, usually white rot of sapwood, sometimes on living trees. D. ambigua Berk., Va. to Mo. & southward; D. confragosa Bolt. ex Fr., N.Y. to N. Car. & La.; D. farinacea (Fr.) Overh., La., S.Car.; D. unicolor Bull. ex Fr., N.E. and Central States.

D. quercina L. ex Fr., butt rot, brown cubical heart rot, timber rot. General.

Daldinia spp., white streaked sapwood rot of logs & slash. Cosmopolitan. D. concentrica (Bolt. ex Fr.) Ces. & DeNot., D. occidentale Child, D. vernicosa (Schw.) Ces. & DeNot.

Diaporthe leiphaemia (Fr.) Sacc. var. raveneliana (Thüm. & Rehm) Wehmeyer, twig canker, dieback. Mass. to Fla. & Iowa.

Diatrype spp., especially D. stigma Hoffm. ex Fr., on branches, ? canker. Va. to Ala., Texas & Ill.

Diatrypella quercina (Pers. ex Fr.) Nits., on branches. Widespread.

Dichaena quercina Pers. ex Fr., bark canker. Ala., N.J., Texas.

Diplodia spp., twig canker, dieback. Chiefly D. longispora Cke. & Ell. (conidial stage of Physalospora obtusa ?) on Q. prinus & Q. alba; others, perhaps related to other Physalospora spp., on twigs, acorns and leaf galls.

Dothiorella quercina (Cke. & Ell.) Sacc., branch canker. Conn. to N.J. & Ill. Conidial stage of Physalospora glandicola.

Endothia spp., on bark of branches & exposed roots. Chiefly saprophytic are E. fluens (Sow.) Shear & Stevens, occurring from Pa. to N.Car. & Tenn.; its var. mississippiensis Shear & Stevens in Ky., Miss. & Tenn.; and E. singularis (H. & P. Syd.) Shear & Stevens, in Colo. & N. Mex. E. gyrosa (Schw.) Fr., occurring from Md. to Fla., Ind., Texas & Calif., and E. parasitica (Murr.) P.J. & H.W. And., reported on Quercus spp. in Mass., Pa. & Md. are sometimes parasitic.

QUERCUS - continued

Erysiphe trina Harkn., powdery mildew. On Q. agrifolia, Calif.
Favolus alveolaris(DC. ex Fr.) Quél., white sapwood rot of logs & slash. N.E. and Central States.
Fistulina hepatica Huds. ex Fr., brown cubical heart rot (brown oak, foxiness), sprout butt rot. Eastern & Central States.
Fomes applanatus (Pers. ex Fr.) Gill., root & butt rot, white mottled heart rot. General.
F. everhartii (Ell. & Gall.) Schrenk, trunk canker, white or yellow flaky heart rot, often on living trees. Eastern and Central States, Mont.
F. fomentarius (L. ex Fr.) Kickx, white mottled sapwood & heart rot, sometimes on living trees. N.E. and Central States.
F. igniarius (L. ex Fr.) Kickx, white mottled heart rot. Eastern and Central States to Okla. Var. laevigatus (Fr.) Overh., La.
F. lobatus (Schw.) Cke., white spongy rot. N.Car. to Ark. & La.
F. robustus Karst., white heart rot. Ohio, Pa., Va.
Fomes spp., wood rot. Other spp. reported on trunks, logs & branches, sometimes causing butt or heart rot, include F. calkinsii (Murr.) Sacc. & D. Sacc., W.Va. to N.Car. & La.; F. connatus (Weinm. ex Fr.) Gill., Va.; F. geotropus Cke., La., Miss.; F. marmoratus (Berk. & Curt.) Cke., Calif., Fla., Texas; F. ohiensis (Berk.) Murr., Va.
Fomitiporia spp., wood rot of dead standing trees & logs. Southern States. Spp. reported include F. dryophila Murr., F. earleae Murr., and F. flavomarginata Murr.
Fusicoccum sp. (F. ellisianum Sacc. & Syd.?), branch canker. Md., Ill. Conidial stage of Diaporthe sp. ?)
Ganoderma curtisii (Berk.) Murr., root & butt rot, white heart rot. Md. to Fla. & Texas.
G. lucidum (Leyss. ex Fr.) Karst., white heart rot. Pa. to N.Car. & La.
Geotrichum sp., pink wood stain. Southern States.
Gloeosporium canadense Ell. & Ev. and G. nervisequum Fckl. (In U.S. reports considered the conidial stage of Gnomonia veneta, but in Europe identified on Quercus as G. quercinum Westl. and considered distinct from the sp. on Platanus.)
G. quernum Harkn., shoot blight. On Q. agrifolia, Calif.
G. septorioides Sacc. (Marsonia quercina Wint.) Leaf spot. Mo.; and var. major Ell. & Ev., N.J.
Gnomonia veneta (Sacc. & Speg.) Kleb., anthracnose, leaf blight. Chiefly on Q. alba; general east of Great Plains, also Calif.
Godroniopsis quernea (Schw.) Diehl & Cash, on branches, ? canker. Conn. to Fla. & Mo.
Hydnum erinaceus Bull. ex Fr., butt rot, white spongy heart & sapwood rot, often on living trees. Eastern and Central States. Other spp. reported as causing decay, sometimes of living trees are H. laeticolor Berk. & Curt., H. ochraceum Pers. ex Fr., and H. pulcherrimum Berk. & Curt.

QUERCUS -- continued.

Hymenochaete rubiginosa (Dicks. ex Fr.) Lév., white pocket rot of logs & timber. Eastern States. Other spp. reported as causing decay are H. corrugata (Fr.) Lév., H. curtisii (Berk.) Morg., and H. sallei Berk. & Curt.

Hypoderma ilicinum DeNot., on leaves of evergreen oaks. Gulf States.

Irpex spp., wood rot, chiefly logs & branches. I. lacteus Fr., I. obliquus Schrad. ex Fr., and I. pachyodon Pers., among others, are reported as causing decay.

Lentinus tigrinus Bull. ex Fr., sprout butt rot. La., Miss. Other spp. reported on dead wood.

Lenzites betulina L. ex Fr., white sapwood rot of logs & timber. Widespread. Likewise L. trabea Pers. ex Fr. and L. vialis Pk., occasional.

Leptothyrium dryinum Sacc., on leaves. Eastern States to Wis. & Texas.

Macrophoma dryina (Berk. & Curt.) Berl. & Vogl. (Sphaeropsis dryina Berk. & Curt.), on branches. Ill., Pa. (Conidial stage of Physalospora sp. ?)

M. nervicola Ell. & Ev., on leaves. Okla., Wis.

Marssonina martinii (Sacc. & Ell.) P. Magn., leaf spot. Conn. to Gulf States, Kans. & Wis.

M. quercus (Pk.) P. Magn., Ind., Mo., N.Y., Texas. A fungus described as Marsonia quercina Wint. in Mo., was subsequently considered a synonym of Gloeosporium septorioides and more recently reported again under this name in Pa. as M. quercina Wint. var. major Ell. & Ev.

Merulius incarnatus Schw. and M. tremellosus Schrad. ex Fr., wood rot. Eastern States.

Microsphaera alni DC. ex Wint. (M. quercina (Schw.) Burr.) and M. alni var. extensa (Cke. & Pk.) Salm., powdery mildew. (Usually on coppice and nursery plants. The var. extensa is reported chiefly in the Eastern and S. E. States, but often is not distinguished; the var. calocladophora (Atk.) Salm. on Q. laurifolia and Q. nigra also is considered distinct by some authorities.)

Monochaetia desmazierii Sacc., large leaf spot. Mass. to S.Car. & Tenn., Calif.

M. taphrinicola (Ell. & Ev.) Sacc., on Taphrina spots. Pa.

Morenoella quercina (Ell. & Mart.) Theiss., black leaf spot. Va. to Fla. & Texas.

Mycosphaerella spp., chiefly on fallen leaves. Those reported include M. aquatica (Cke.) Miller, Ga.; M. catesbeyi (Cke.) Miller, Ga.; M. nigrita (Cke.) Miller, Ga.; M. maculiformis (Pers. ex Fr.) Schroet., and M. punctiformis (Pers. ex Fr.) Schroet., Eastern and S. E. States; M. spleniata (Cke. & Pk.) House, Ga., N.Y.

Myriangium duriaei Mont. & Berk., on scale-infested branches. N.Car.

Nectria cinnabarina Tode ex Fr., on twigs & branches, ? canker. Widespread.

N. coccinea Pers. ex Fr. (N. ditissima Tul. ?), branch & trunk canker. N. E. States.

N. galligena Bres., trunk canker. Oregon.

QUERCUS -- continued.

Nigrospora sphaerica (Sacc.) Mason, twig blight ? Ill.
Nummularia clypeus (Schw.) Cke., on branches. Eastern & Southern States. Canker & dieback, Ill.
Oidium sp., witches'-broom. Calif. (See also Microsphaera and Phyllactinia.)
Pestalotia (Pestalozzia) spp., ? leaf spot. Spp. reported on green or partly green leaves include P. clavispora Atk., Ala.; P. montellica Sacc. & Vogl., Pa.; P. nervalis Ell. & Ev., Wis. Other spp. on fallen leaves.
Pezizella oenotherae (Cke. & Ell.) Sacc., on twigs & fallen leaves. Va.
Pholiota sp., sprout butt rot. Pa., Va.
Phoma spp. (P. aposphaerioides Briard & Hariot and P. quercina (Pk.) Sacc.), twig & branch canker. N.Y.
Phomopsis sp., trunk & branch galls. Md., Va., Texas.
P. quercina (Sacc.) Höhn., dieback & canker. Ill.
Phoradendron flavescens (Pursh) Nutt., mistletoe. N.J. to Mo. and southward.
P. engelmanni Trel. Texas.
P. longispicum Trel. Ariz., Calif.
P. villosum Nutt. Calif., Oregon.
Phyllactinia corylea Pers. ex Karst., powdery mildew. Eastern & Central States, Calif.
Phyllosticta agrifolia Ell. & Ev., leaf spot. On live oaks. Calif.
P. livida Ell. & Ev. On various spp. Widespread.
P. ludoviciana Ell. & Mart. On Q. nigra. Fla., La.
P. phomiformis Sacc. On white and chestnut oaks. Eastern States to Fla., Kans. & Wis.
P. quercus Sacc. & Speg. On Q. macrocarpa. Ind., N.Y., Wis.
P. quercus-ilicis Sacc. On Q. virginiana. Miss.
P. quercus-prini Ell. & Ev. On Q. prinus. W.Va.
P. tumoricola Pk. On Q. alba. N.Y.
P. vesicatoria Thüm. On Q. brevifolia. S.Car.
P. virens Ell. & Langl. On Q. virginiana. La.
P. wislizeni Ell. & Ev. On Q. wislizeni. Calif.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora spp., on twigs & branches sometimes causing dieback & canker. Usually reported in conidial stage as Diplodia, Dothiorella or Sphaeropsis.
P. fusca N. E. Stevens. N.Y. to Fla., La. & Ohio
P. glandicola (Schw.) N.E. Stevens. Conn. to Md., Mich., & Ill.
P. obtusa (Schw.) Cke. N.Y. to Fla., La. & Ill.
P. rhodina (Berk. & Curt.) Cke. Va. to Fla., Iowa.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Md., Mich.
Phytophthora cactorum (Leb. & Cohn) Schroet., bleeding canker. Calif., Fla., N.Car.
Pleurotus ostreatus Jacq. ex Fr., sapwood rot, sprout butt rot. Eastern and Central to Gulf States. P. ulmarius Bull. ex Fr., P. petalloides Bull., P. spathulatus (Fr.) Pk. also reported as causing decay.

QUERCUS -- continued.

Polyporus berkeleyi Fr., string & ray butt rot. Eastern States to N.Car. & Ark.

P. croceus Pers. ex Fr., white pocket butt rot. Eastern & Central to Gulf States.

P. dryadeus Fr., white root & butt rot. Eastern & Central States to Texas.

P. dryophilus Berk. (P. rheades Pers. ex Fr.), white pocket heart rot. Widespread, including the S.W. and Pacific Coast States.

P. frondosus Dicks. ex Fr., straw-colored spongy butt rot. N.E. and Central States to La.

P. hispidus Bull. ex Fr., trunk canker, white spongy heart rot, Pa. to Fla. & La.

P. obtusus Berk., white spongy heart rot, commonly on living trees. Md. to Ga. & La., Minn.

P. spraguei Berk. & Curt., brown crumbly root & butt rot. Eastern & Central States to La.

P. sulphureus Bull. ex Fr., and var. cincinnatus (Morgan) Overh., root & butt rot, brown cubical heart rot. Eastern & Central States to Ga. & Texas.

Polyporus spp. Others reported usually on dead wood, sometimes causing sapwood (wound) rot, sprout butt rot, or heart rot, include: P. abietinus Dicks. ex Fr., Calif.; P. admirabilis Pk., Pa.; P. adustus Willd. ex Fr., widespread; P. arcularius Batsch ex Fr., Pa., N. Car.; P. biformis (Klotzsch) Berk., widespread; P. caesius Schrad. ex Fr., Appalachian region; P. cinnabarinus Jacq. ex Fr., widespread; P. cinnamomeus Jacq. ex Fr., N.Y., N.Car.; P. compactus Overh., Pa., Va.; P. cuticularis Bull. ex Fr., Pa. to Ark. & La.; P. delectans Pk., Pa., Va.; P. dichrous Fr., Va. to La.; P. fissilis Berk., La.; P. galactinus Berk., Pa. to Tenn. & La.; P. giganteus (Pers. ex Fr.), Pa., La.; P. gilvus (Schw.) Fr., widespread; P. graveolens (Schw.) Fr., Ohio, N.Car.; P. hirsutus Wulf. ex Fr., widespread; P. lacteus Fr., Md., N.Y., S.Dak.; P. pargamenus Fr., widespread; P. ludovicianus (Pat.) Sacc. & Trott., S. Car. to Fla. & La.; P. poculus (Schw.) Berk. & Curt., Ohio, Pa., S. Car.; P. sanguineus L. ex Fr., Va. to Fla. & La.; P. sector Ehr. ex Fr., Ga. to Fla. & Texas; P. spumeus Sow. ex Fr., La., Md.; P. squamosus Huds. ex Fr., Conn.; P. unitus Pers., widespread; P. tulipiferus (Schw.) Overh., widespread; P. versicolor L. ex Fr., widespread; P. zonalis Berk., La., Miss.

Poria spp., wood rot, chiefly of logs & branches, sometimes heart rot of living trees, occasionally on timber. Spp. reported include P. ambigua Bres., Southern States; P. andersonii (Ell. & Ev.) Neuman, heart rot, Pa. to N.Car., Ark. & Calif.; P. cocos (Schw. ex Fr.) Wolf, root rot, butt rot, S.E. States; P. incrassata (Berk. & Curt.) Burt, timber rot, Southern States; P. nigra Berk., Eastern States to Fla. & Wis.; P. punctata Fr., Eastern States to Mo. & Wis.; P. subacida (Pk.) Sacc., Eastern States; P. versipora Pers. ex Romell, widespread; and others.

QUERCUS -- continued.

Pseudovalsa longipes (Tul.) Sacc. (Coryneum kunzei Cda.), twig & branch canker. Mass. to Va., Texas & Iowa.

Pyrenochaeta minuta Carter, on twigs, ? canker. Ill.

Rhodosticta quercina Carter, branch canker. Ill.

Schizophyllum commune Fr., wood rot. Occasional.

Septobasidium spp., on scale insect-infested branches. Spp. reported include S. canescens Burt, Calif.; S. cokeri Couch, S. curtisii (Berk. & Desm.) Boed. & Stein., S. fuscum Couch, S. pseudopedicellatum Burt, S. retiforme (Berk. & Curt.) Pat., S. rugulosum Couch, S. sinuosum Couch, S. tenue Couch, in S.E. and Gulf States.

Septoria dryina Cke., leaf spot. Kans., Mass., S.Car.

S. neglecta Earle. Ala., Minn.

Sphaerognomonia polystigma (Ell. & Ev.) Thompson & Miller, on leaves. Ga., La.

Sphaeropsis spp., dieback, canker. Conidial stages of Physalospora, as S. gallae (Schw.) Berk. & Curt. and S. quercina Cke. & Ell. = P. glandicola; S. malorum Pk. = P. obtusa; S. quercinum Cke. & Harkn. (an illegitimate name) is reported from Calif. & Ill.

Sphaerotheca lanestris Harkn., brown mildew. Central & Southern States, Calif.

Stereum frustulosum Pers. ex Fr., sprout butt rot, white pocket heart rot. N. E. and N. Central to Gulf States, Oregon.

S. gausapatum Fr., sprout butt rot, white pocket heart rot. N. E. and Central to Gulf States.

S. murrayi (Berk. & Curt.) Burt, white pocket heart rot. Eastern & Central States.

S. subpileatum Berk. & Curt., butt rot, white pocket heart rot. Pa. to Mo. & Gulf States.

Stereum spp. Others reported causing decay, chiefly of logs, branches, & timber include S. fasciatum Schw., S.E. to Central & Gulf States; S. fuscum Schrad. ex Quél., widespread; S. hirsutum Willd. ex Fr., widespread; S. lobatum (Kze.) Fr., Md., N.Car., Texas; S. rameale Schw., widespread; S. rugosum Pers. ex Fr., N.Y., N.Car.; S. sericeum Schw., Ind., N.Car., Pa.; S. umbrinum Berk. & Curt., Southern States.

Strumella coryneoidia Sacc. & Wint., trunk canker. N.E. States to Va., Mo., & Minn.; Oregon.

Taphrina coerulescens (Desm. & Mont.) Tul., leaf blister. General except the far West; most injurious in the South.

Trabutia erythrospora (Berk. & Curt.) Cke., black leaf spot. Calif., Texas.

T. quercina (Fr. & Rud.) Sacc. & Roum., N.Car. to Fla. & Miss.

Trametes spp., wood rot, chiefly of logs & timber. Spp. reported include T. hispida Bagl., S.Dak.; T. rigida Berk. & Mont., Southern States; T. sepium Berk., N.J. to Ill. and southward.

Ustulina vulgaris Tul., wood rot (logs & stumps), sometimes causing sprout butt rot in Eastern States.

QUERCUS -- continued.

Valsa intermedia Nits., dieback, canker. Ill.
Venturia asterinoides Ell. & Mart., on leaves. Fla., Ga.
V. orbicula (Schw.) Cke. & Pk., on leaves. N.J., N.Y., Kans.
Chlorosis -- physiological, usually iron deficiency. Occurs especially in pin oaks planted as lawn and street trees. N.E. and N. Central States.

(DIVISION OF MYCOLOGY AND DISEASE SURVEY).

FIRST REPORT OF LATE BLIGHT OF POTATO IN COLORADO

W. A. Kreutzer and John G. McLean

Late blight of potato (Phytophthora infestans) was found in the irrigated region of northern Colorado during the season of 1941. To the best of the writers' knowledge this is the first recorded instance of the occurrence of this disease in Colorado. The disease was first found occurring in storage; in a few instances it was causing considerable damage. Most of the cellars examined showed no infected tubers. Of 20 cellars showing infection, the majority showed a trace to 0.5 percent of the disease. One seed lot contained 1 percent of infected material, and two seed lots showed almost 25 percent of the trouble. In the latter instance the tubers were grown from seed obtained from the Lake States region.

Weather conditions during the growing season in Colorado ordinarily do not favor the appearance and spread of late blight. Although the average temperatures are well within the range in which P. infestans will develop, relatively low rainfall, low humidities, and a large number of clear days during the growing season prevent the epiphytotic occurrence of the disease. Conditions during the season of 1941, however, were more favorable for the development of the malady. Rainfall was above normal, and there was an unusually large number of cloudy and partially cloudy days. Frequently on such days there was light rainfall accompanied by lowered temperatures.

Although weather conditions similar to 1941 would not be expected normally in future years, precautionary measures are being taken to prevent the use of infected seed whether grown locally or obtained from outside sources.

(COLORADO AGRICULTURAL EXPERIMENT STATION).

PREVALENCE OF CERTAIN PEA DISEASES IN THE PALOUSE SECTION OF IDAHO IN 1941

W. J. Virgin

Since their appears to be some concern among various seedsmen and plant pathologists in regard to the prevalence of certain pea diseases in Western growing areas, a note concerning pea diseases in the Palouse area of Idaho seems appropriate at this time.

The early part of the growing season of 1941 was unusually wet as compared with the average for 47 years (1892 - 1938). Examination of the accompanying graph (Fig. 1) illustrates the fact that the precipitation was heavy in April, May, and June, whereas only 0.3 of an inch of rain fell in July and only 0.8 of an inch in August. Because of the abundant rains in May and June peas made a heavy vine growth. Inspection of fields in the fore part of July revealed the presence of Mycosphaerella blight (Mycosphaerella pinodes), leaf blotch (Septoria pisi), and

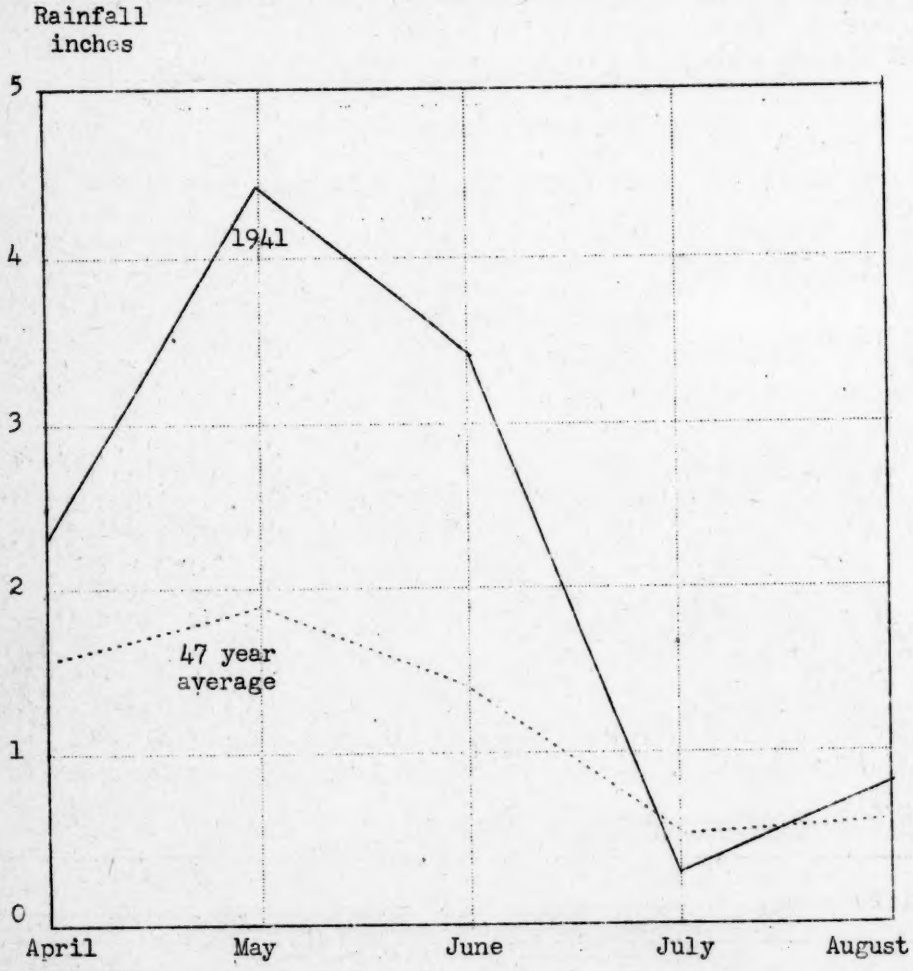

Fig. 1 -- Rainfall of 1941 pea growing season compared with the 47 year average. Note rainfall in July and August was about normal.

bacterial blight (Bacterium [Phytomonas] pisi) on the lower leaves of plants in a few of the fields. These same fields were examined about three weeks later and these diseases were still found confined to the lower leaves. Apparently the dry weather in July and August held them in check. In addition to these three diseases, pea rust (Uromyces fabae) was found in one field in the last examination. Both the uredinial and aecial stages were present on the basal leaves of the pea plants.

It appears that these diseases played a minor role and did little damage. Undoubtedly if the heavy rains had continued through July and August, these diseases would have spread and caused considerable pod and seed infection. Fortunately this was not the case.
(UNIVERSITY OF IDAHO).

SPERGON AS A SEED DISINFECTANT

R. W. Leukel

In a recent number of the Plant Disease Reporter, O. H. Elmer 1/ reported briefly on the use of Spergon as a treatment for sweet potatoes and suggested that the possibilities of this relatively new non-metallic seed disinfectant be further investigated and reported on by others in the interests of national defense, since seed disinfectants containing such metals as mercury and copper may not be generally available in the near future.

In response to this suggestion, the writer submits the following results from an experiment on the use of Spergon on sorghum seed for preventing seed rot and seedling blight and controlling covered kernel smut. In May 1940 seed of Sharon kafir was inoculated with spores of covered kernel smut at a 1-100 spore dosage, and separate portions of this lot were treated with New Improved Ceresan at 1/2 ounce per bushel, or copper carbonate or Spergon at 3 ounces per bushel. Plantings were made in the field at Beltsville, Maryland, and through the cooperation of A. F. Swanson, also at Hays, Kansas, in June 1940. Seed of kafir and feterita, treated as above, was also planted in the greenhouse in soil whose temperature averaged about 20° C. during the period of emergence. The data on emergence along with the field data on smut control are shown below.

Effect of certain seed disinfectants on emergence and covered kernel smut in sorghum.

Seed disinfectant	Rate per bushel	Emergence in		Smutted heads at	
		feterita	kafir	Beltsville	Hays
	Ounces	Percent	Percent	Percent	Percent
None	--	44	80	55	37
New Improved Ceresan	1/2	62	87	0	0
Copper carbonate	3	62	87	0	1
Spergon	3	75	88	0	0

1/ Elmer, O.H. The use of Spergon for sweet potato seed and sprout treatments. Plant Disease Reporter 26 (2): 44-46. 1942.

The excellent control of covered kernel smut obtained with Spergon in this experiment, along with its apparently beneficial effect on emergence, suggests the possibility of its being suitable also for treating wheat for the control of bunt. It might also be suitable for seed of corn, oats, barley, and other crops. Felix 2/ has reported extremely favorable results from its use on peas and cotton seed. It is hoped that this brief report will serve to stimulate further investigation of the possibilities of this material as a control for other seed-borne or soil-borne plant diseases. (DIVISION OF CEREAL CROPS AND DISEASES, BUREAU OF PLANT INDUSTRY, WASHINGTON, D. C.)

A FURTHER CORRECTION RE PHONY PEACH IN OKLAHOMA

Under date of March 3, 1942, Dr. K. Starr Chester addressed the following letter to the Survey:

> "With reference to your correction on page 82 in the current number of the 'Plant Disease Reporter', in particular, 'Phony peach has not been found in Oklahoma,' the 'Plant Disease Reporter' Supplement 85, 1933, page 36 states that the Division of Phony Peach Eradication found three infected trees in Oklahoma in 1932.
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> "So far as I know, this is the only report of this disease in this State."

Dr. Chester is of course correct. The last sentence in the correction (P.D.R. 26:82) should read, Phony Peach was not found in Oklahoma in 1939.

2/ Felix, E. L. Tetrachloro-para-benzoquinone, an effective organic seed protectant. (Abstract) Phytopath. 32: 6. 1942.